WHAT IS CLAIMED IS:

1. A system for controlling an output of an electrosurgical generator comprising:

a drive circuit for generating an output, the output being responsive to a feedback signal and operatively coupled to at least one electrode of the electrosurgical generator;

at least one sensing circuit operatively coupled to the at least one electrode for generating at least one signal, the at least one signal corresponding to a value of a waveform present on the at least one electrode;

a processing circuit for receiving the at least one signal, the processing circuit including associated circuitry for determining a value of the at least one signal;

a determining circuit in communication with the processing circuit for generating an output signal, the output signal being representative of the value of the at least one signal; and

a control circuit for generating a feedback signal, the feedback signal representative of a difference between a value of the output signal and a reference value, the feedback signal operatively coupled to the drive circuit.

2. A system according to claim 1, wherein the processing circuit includes at least one digital signal processor.

3. A system according to any preceding claim, wherein the at least one digital signal processor includes a Goertzel algorithm.

4. A system according to any preceding claim, wherein the Goertzel algorithm determines phase difference between a voltage waveform and a current waveform.

5. A system according to any preceding claim, wherein the phase difference is used to compensate for energy delivery at the operating site.

6. A system according to any preceding claim, wherein the phase difference provides feedback to the generator about tissue relating to at least one of: tissue change over time, tissue impedance, tissue type, tissue cycle completion.

7. A system according to any preceding claim, wherein the at least one sensing circuit includes a voltage sensing circuit and/or a current sensing circuit.